



Minnesota State University, Mankato
**Cornerstone: A Collection of Scholarly
and Creative Works for Minnesota
State University, Mankato**

Undergraduate Research Symposium

2014 Undergraduate Research Symposium


Apr 21st, 3:15 PM - 4:15 PM

The Relationship Between Temperament and Changes in Cultural Competency Among Undergraduate Students

Kwame Opoku Akyeampong
Minnesota State University - Mankato

Olufolajimi Onadipe
Minnesota State University, Mankato

Follow this and additional works at: <https://cornerstone.lib.mnsu.edu/urs>

 Part of the [Bilingual, Multilingual, and Multicultural Education Commons](#), and the [Higher Education Commons](#)

Akyeampong, Kwame Opoku and Onadipe, Olufolajimi, "The Relationship Between Temperament and Changes in Cultural Competency Among Undergraduate Students" (2014). *Undergraduate Research Symposium*. 1.

https://cornerstone.lib.mnsu.edu/urs/2014/oral_session_14/1

This Event is brought to you for free and open access by the Undergraduate Research Center at Cornerstone: A Collection of Scholarly and Creative Works for Minnesota State University, Mankato. It has been accepted for inclusion in Undergraduate Research Symposium by an authorized administrator of Cornerstone: A Collection of Scholarly and Creative Works for Minnesota State University, Mankato.

The Relationship between Temperament and Changes in Cultural Competency among Undergraduate Students

Kwame Opoku Akyeampong (Bio-medical Science)
Olufolajimi Onadipe (Bio-medical Science)

Faculty Mentor: Dr. Elizabeth Sandell (Elementary Education)
Undergraduate Research Symposium
Minnesota State University, Mankato (MN)
April 20, 2014

Big ideas. Real-world thinking.

Research Questions

1. What changes occur in cultural competence of undergraduates as a result of the human relations course?
2. Does temperament affect the change in cultural competence of undergraduates?

Definitions of Key Terms

- Temperament (Keirsey,1998) may be considered to include a set of observable personality traits, e.g., communication habits, behavior patterns, values, attitudes and talents, etc.
- Culture is “the customary beliefs, social forms, material traits of a racial, religious, or social group; also, the characteristic features of everyday existence shared by people in a place or time” Merriam-Webster (2012).
- Cultural Competency is "the capability to accurately understand and adapt behavior to cultural differences and commonality" (Hammer and Bennett, 2010).

MSU Diversity Requirement

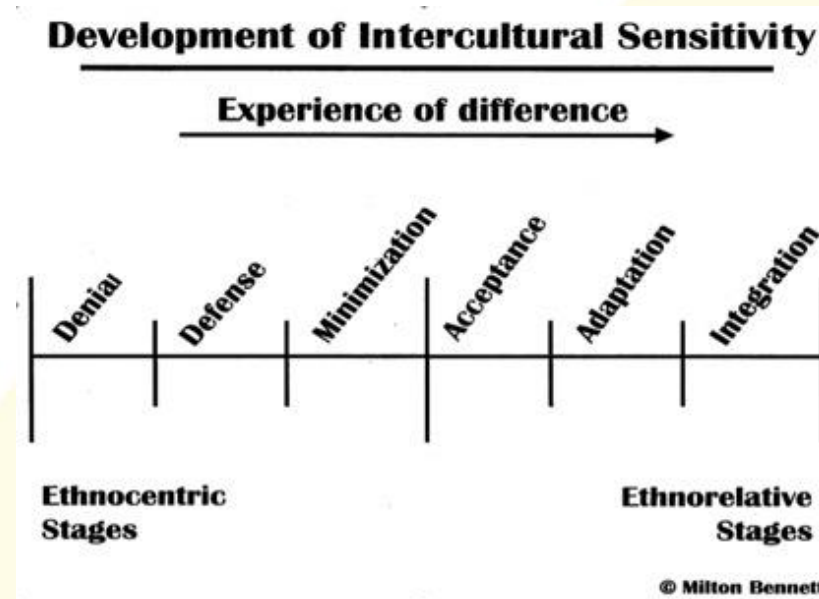
- **Education:** “To prepare principled professional practitioners who thrive and succeed in diverse environments, promote collaborative and generative communities, and engage in life-long learning.”
- **MSU Purple courses:** “To increase students’ understanding of individual and group differences, emphasizing the dynamics of race, gender, sexual orientation, age, class, and/or disabilities.”

Developmental Model of Intercultural Sensitivity

- **Milton Bennett**
- **The first three stages are defined as avoiding cultural differences**
- **The last three stages are defined as seeking cultural differences**



Developmental Model of Intercultural Sensitivity



Developmental Model of Intercultural Sensitivity (Hammer et. al., 2003)

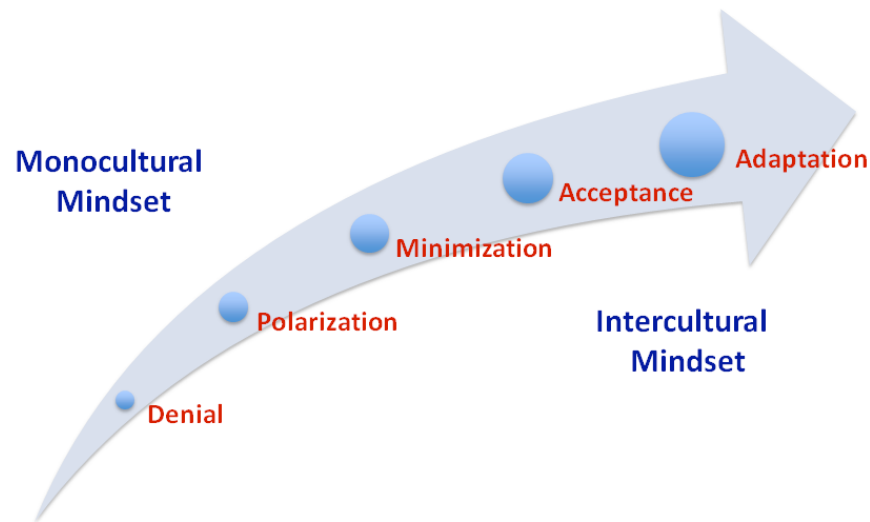
Intercultural Development Inventory

- **Mitchell R. Hammer, PhD**
- **Originated from the DMIS**
- **Designed to measure individual/group intercultural sensitivity**



Intercultural Development Inventory

Intercultural Development Continuum



Results from Previous Research

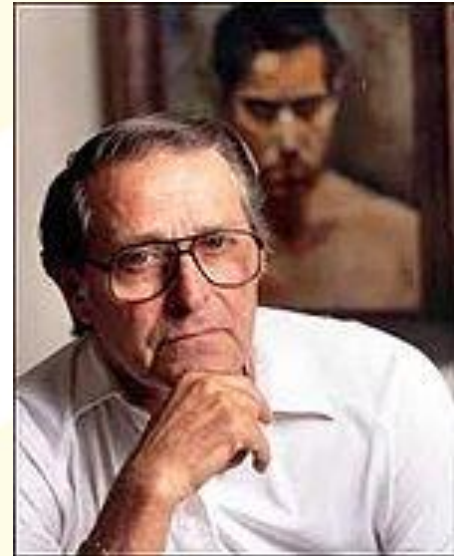
1. Undergraduate students arrive at the class with polarization orientation or ethno-centric minimization orientation to cultural differences and similarities (McNabb & Tupy, 2011).
2. With traditional knowledge-based assignments, students showed no statistically significant differences in cultural orientation during the semester (McNabb & Tupy, 2011).
3. There were no statistically significant differences according to their gender, age, academic major, or academic classification (Tupy, McNabb, & Leidell, 2012).
4. There were no statistically significant differences among students in classes taught by five different instructors (Sandell, 2014).

Previous Results with Significant Differences

1. With intentional assignment to service learning with a culture different than theirs, students showed statistically significant differences between IDI scores at the end of the semester when compared to the beginning of the semester (Tupy, McNabb & Leidell, 2012).
2. With interactive, experiential assignments (such as a cultural partnership with reflection), students showed statistically significant differences between IDI scores at the end of the semester when compared to the beginning of the semester (Sandell & Tupy, 2012).

Keirsey Temperament Sorter II

- **Dr. David Keirsey**
- **Originated from Carl Jung's theory of psychological types**
- **Designed to measure temperament on four scales**
 - A) introvert – extrovert**
 - B) intuitive – sensory**
 - C) feeling – thinking**
 - D) judging – perceiving**



Methodology

- 86 persons, 18 to 30 years old, who were enrolled in EEC 222w (Human Relations in a Multicultural Society) during the Fall semester, 2013.
- The Intercultural Development Inventory (IDI) (Hammer & Bennett, 1998, 2001)
- The Keirsey Temperament Sorter II (KTS-II) (Keirsey, 1998).
- The assessments on-line at the beginning and conclusion of the Fall 2013 semester.

Subjects

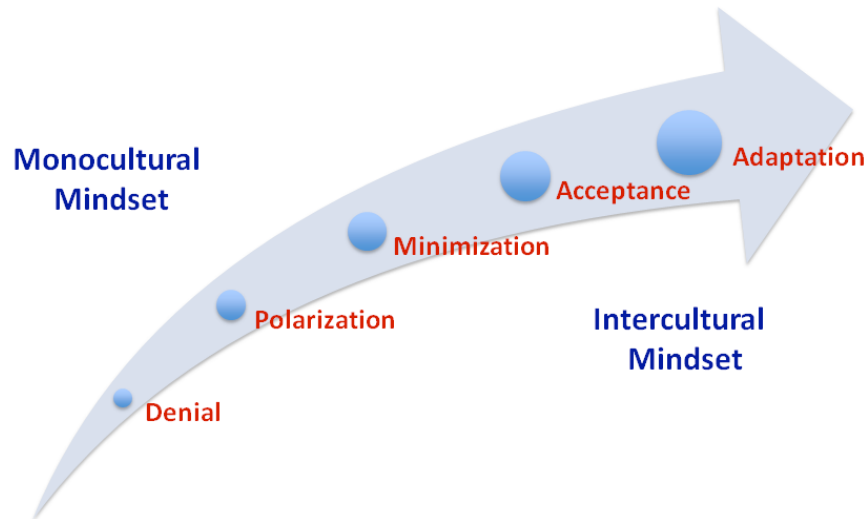
- Total 86
- Male 28
- Female 58
- Freshmen 18
- Sophomores 39
- Juniors 21
- Seniors 8
- 18 - 29 years old 79
- 30+ years old 7
- Education majors 57
- Non-education majors 29

Research Question #1

- **What changes occur in cultural competence of undergraduates as a result of the human relations course?**

Intercultural Development Inventory

Intercultural Development Continuum



Change in Cultural Competence in one semester

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Perceived Orientation – All	PO_pre - PO_post	-2.03169	4.99197	.41892	-2.85986	-1.20352	-4.850	141	.000
Developmental Orientation – All	DO_pre - DO_post	-3.48831	12.39778	1.04040	-5.54511	-1.43151	-3.353	141	.001

Research Question #2

- **Does temperament affect the change in cultural competence of undergraduates?**

Influence of temperament on change in cultural competence

	Type III Sum of Squares	df	Mean Square	F	Sig.
Pre_Post * Introversion/ Extroversion on Perceived Orientation	21.313	1	21.313	1.728	.191
Pre_Post * Introversion/ Extroversion on Developmental Orientation	135.798	1	135.798	1.782	.184
Pre_Post * Intuitive / Sensing on Perceived Orientation	14.155	1	14.155	1.142	.287
Pre_Post * Intuitive / Sensing on Developmental Orientation	14.179	1	14.179	.184	.669
Pre_Post * Feeling / Thinking on Perceived Orientation	10.950	1	10.950	.882	.349
Pre_Post * Feeling / Thinking on Developmental Orientation	78.262	1	78.262	1.021	.314
Pre_Post * Judging / Perceiving on Perceived Orientation	40.789	1	40.789	3.334	.070
Pre_Post * Judging / Perceiving on Developmental Orientation	177.238	1	177.238	2.330	.129

Conclusions

1. **Statistically significant changes occurred in cultural competence of undergraduates as a result of the human relations course.**
2. **Temperament does not affect the changes in cultural competence of undergraduates.**

Future research

- **How does the cultural partnership assignment affect cultural competency?**
- **How does the service learning assignment affect cultural competency?**

Acknowledgements

- Dr. Elizabeth Sandell, research mentor
- Students in EEC 222W
- Dr. Marilyn Hart, Director of the URC
- MSU Foundation
- MSU College of Education
- Undergraduate Research Center at MSU
- Undergraduate Research Symposium, Mankato, Minnesota
- MSU Center for Excellence in Scholarship and Research

References

- Bennett, M. J. (1986). A developmental approach to training for intercultural sensitivity. *International Journal of Intercultural Relations*, 10(2), 179 – 195.
- Hammer, M. R. (2011). Additional cross-cultural validity testing of the Intercultural Development Inventory. *International Journal of Intercultural Relations*, 35, 474 – 487.
- Hammer, M. R., Bennett, M. J., & Wiseman, R. (2003). The Intercultural Development Inventory: A measure of intercultural sensitivity. *International Journal of Intercultural Relations*, 27, 421 – 443.
- McNabb, C. and Tupy, S. (2011). Difference in Students' Cultural Competency Before and After an Intentional Human Relations Experience. *Journal of Undergraduate Research*, Volume 11. Minnesota State University, Mankato, MN.
- Sandell, E. & Tupy, S. (2014). Where Cultural Competency Begins: Changes in Undergraduate Students' Intercultural Competency. (Manuscript submitted).
- Tupy, S., McNabb, C., Koenig, E., Leidall, S., & Sandell, E. (2012). Impact of a Cultural Partnership on Undergraduates' Intercultural Competence. Proceedings of the 2012 National Conference on Undergraduate Research, Weber State University, Ogden, UT.

Questions?

